Memory

Write at 10Gbps
Read at 10Gbps

w

Figure 1 (Prior Art)

Queue 0

Queue 1

Queue 2

Queue 3

201   202   203

Scheduler

204

Figure 2

301
Module 0

302
Module 1

303
Module 2

·····

304
Module n-1

R Gbps

R Gbps

R Gbps

R Gbps
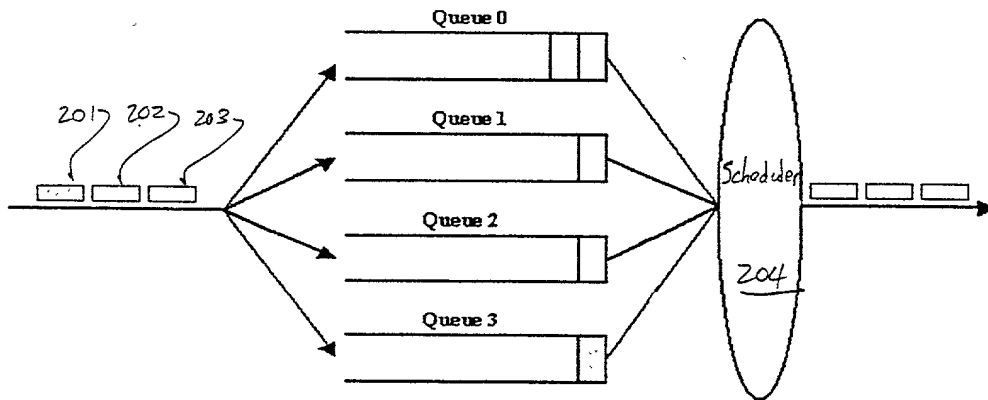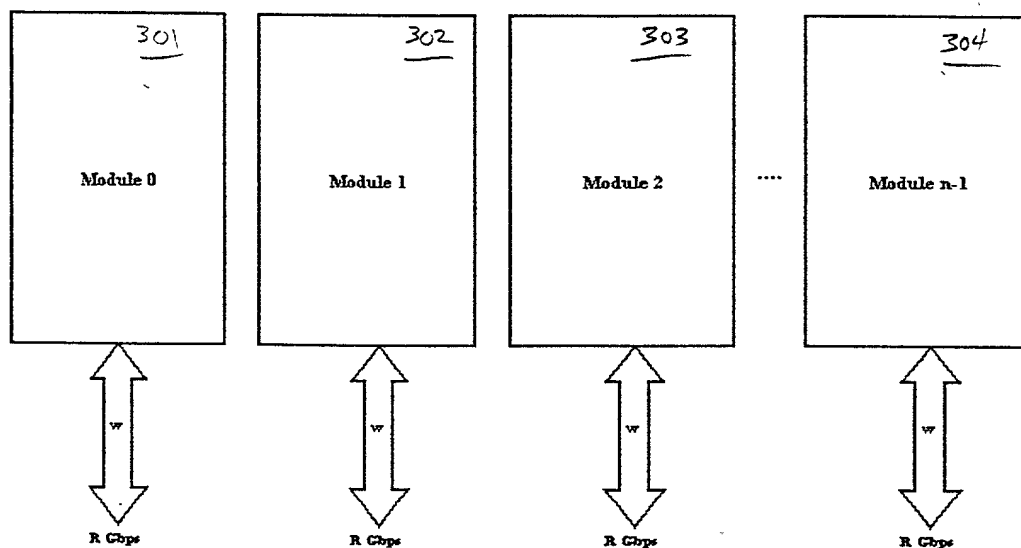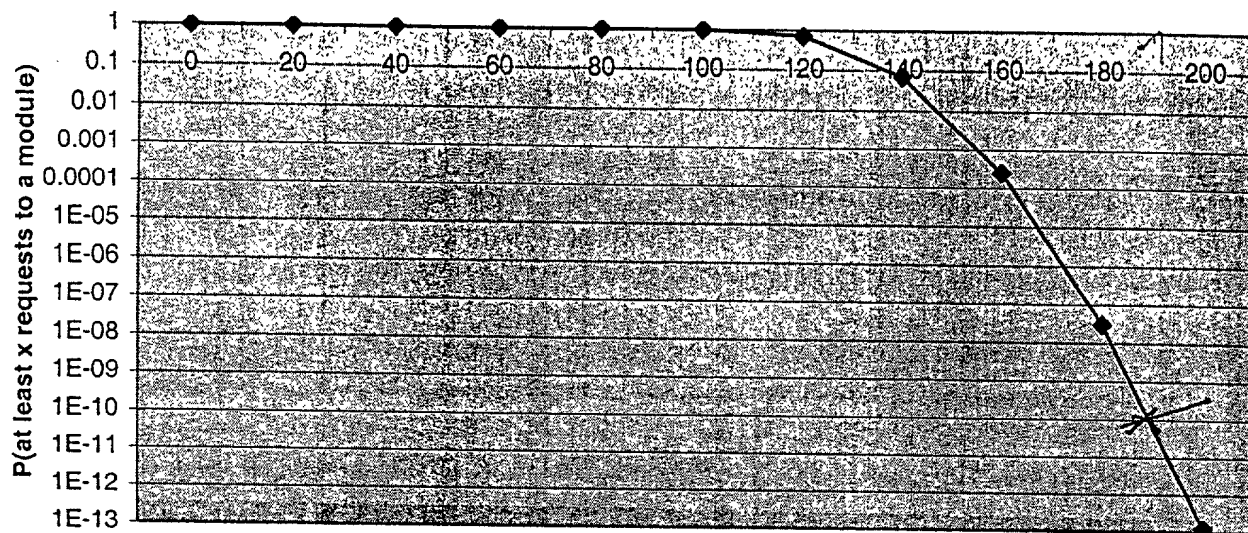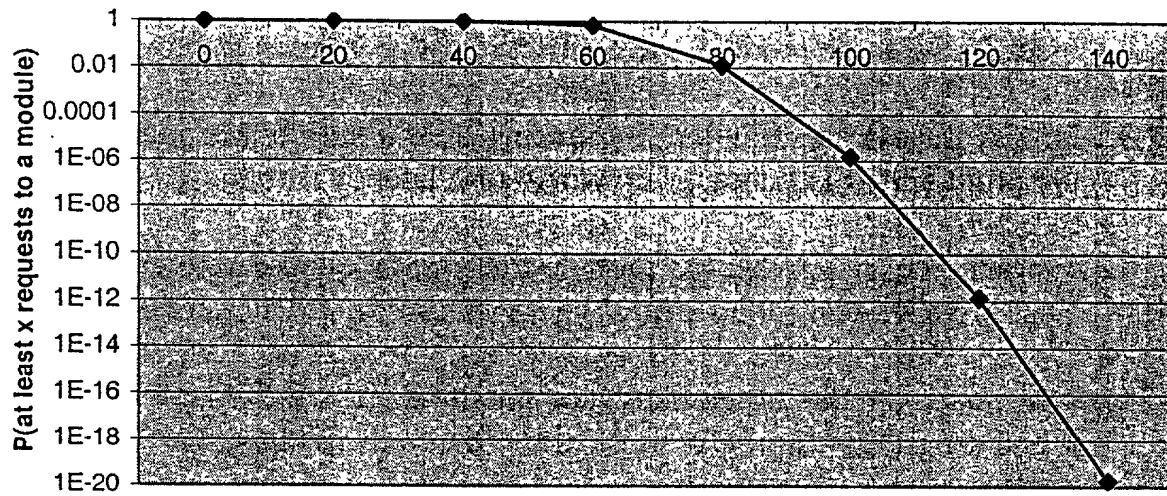
Figure 3

number of modules = 4
P(module getting selected) = 0.25

Number of Requests To A Given Module Out of
500 Consecutive Requests

Figure 4

number of modules = 8
P(module getting selected) = 0.125

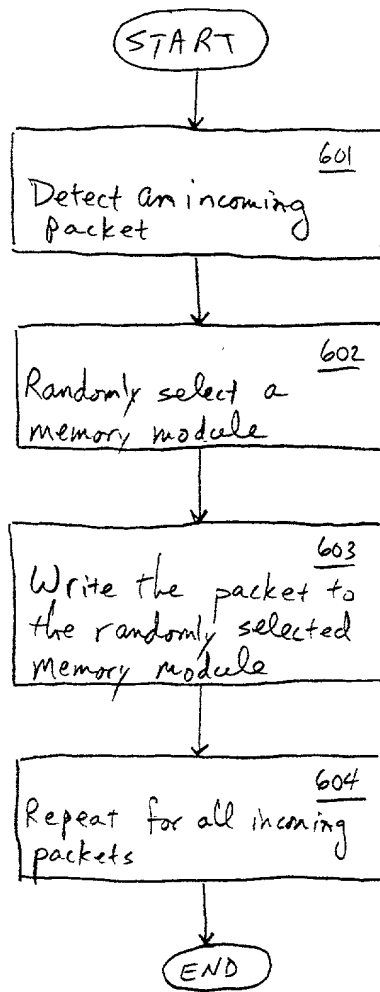Number of Requests to a Given Module Out of
500 Consecutive Requests

Figure 5

START

Detect an incoming packet

601

Randomly select a memory module

602

Write the packet to the randomly selected memory module

603

Repeat for all incoming packets

604

END

Figure 6